

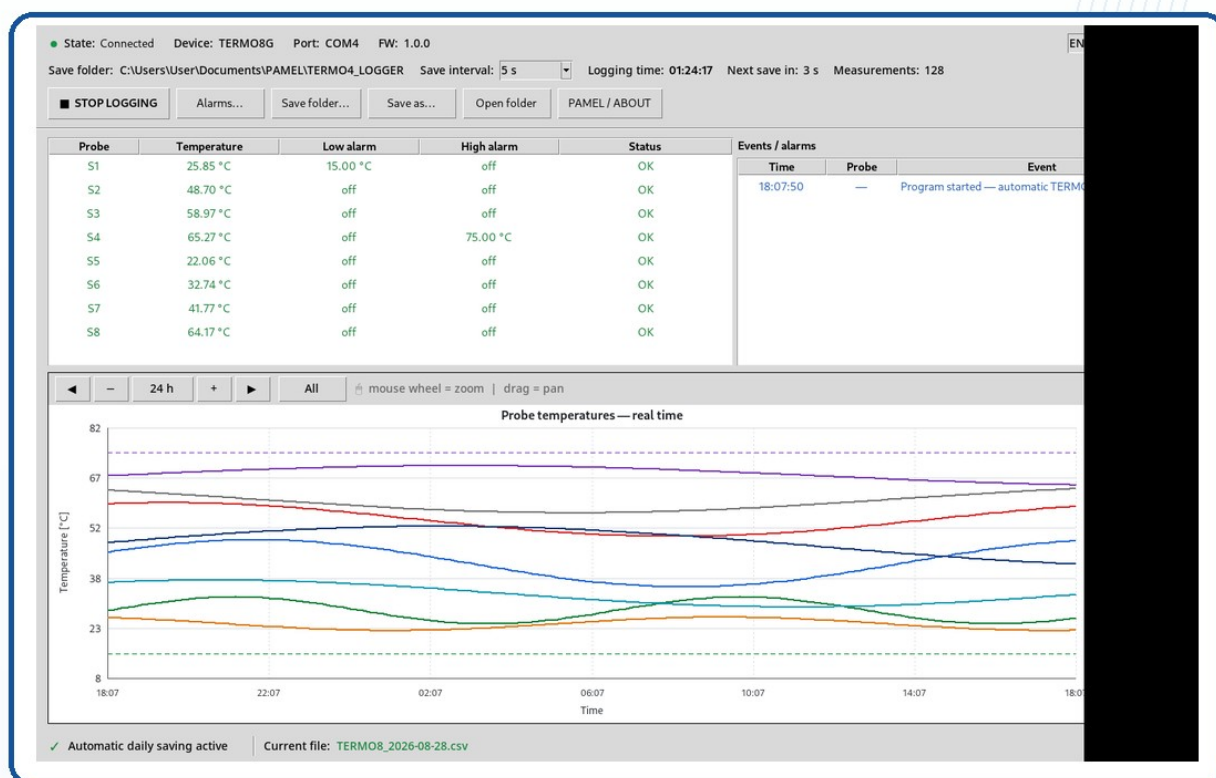


42-300 Myszków, ul. Urodzajna 5E

TEMPERATURE LOGGING PROGRAM

TERMOLOGGER

PAMEL TERMO8 PC Logger • Windows



REQUIRES TERMO4G / TERMO8G WITH USB

The USB module can also be added after purchasing the device.



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Manuals, support and user materials
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MANUAL IDENTIFICATION
TERMOLOGGER_MAN_EN
version 1.0
2026-08-28

1. PRINCIPLE OF OPERATION AND PURPOSE

TERMOLOGGER is a Windows program designed for local viewing and recording of temperatures read from TERMO4G and TERMO8G controllers via USB.

MOST IMPORTANT: The program is a data reader only. It does not change the TERMO settings, start or stop the process, or send control commands.

HARDWARE REQUIREMENTS: The TERMO must be a USB-equipped model. If the device was purchased without USB, the USB module can be added later, after purchase.

Once launched, the program automatically performs:

1. searching for available COM ports in Windows;
2. identification of a compatible TERMO device via a HELLO query;
3. cyclic reading of current temperatures and probe states via GET_ALL;
4. displaying up to 8 temperatures, alarms, events and graphs;
5. saving measurements to a daily CSV file when logging is active.

The absence of a compatible TERMO device does not block the program. In this case, DEMO MODE starts with sample data. Demo data are not saved to the actual measurement files.

2. REQUIREMENTS AND INSTALLATION

To work you need:

- a computer with Windows and a free USB port;
- TERMO4G or TERMO8G equipped with USB interface;
- USB cable compatible with the connector used in a given version of TERMO;
- permissions to install the program and save files in the selected directory.

IF THERMO DOES NOT HAVE USB, there's no need to replace the entire device. A USB interface can be added after purchase – after upgrading, the TERMO can work with the TERMOLOGGER.

Installing the program

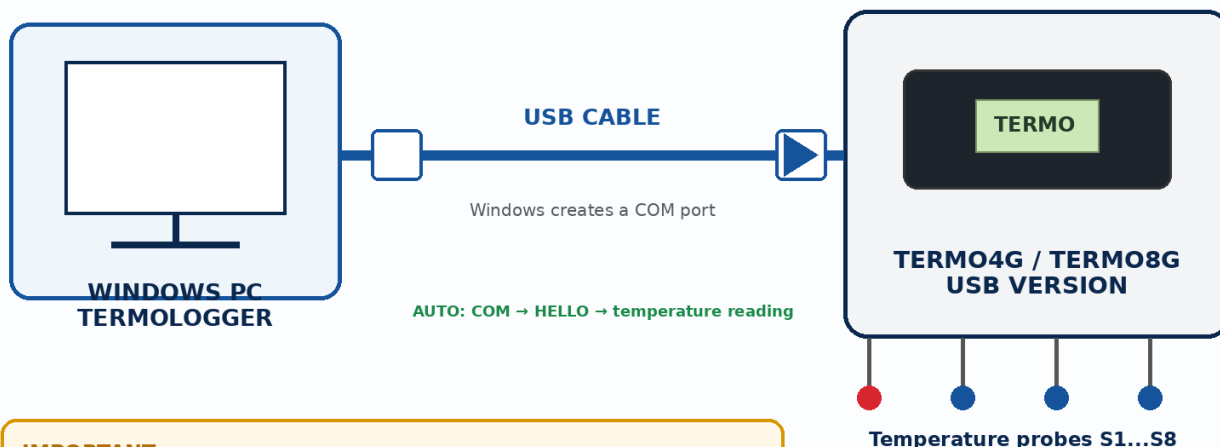
1. Run the PAMEL TERMOLOGGER installer and accept administrator privileges (UAC).
2. The default location for a new installation is C: \PAMEL\TERMO8 LOGGER.
3. The installer can create a shortcut in the PAMEL Start Menu and - optionally - on the desktop.
4. After installation, the program can be launched immediately. There is no need to manually select a COM port or enter an activation code.
5. Updating and standard uninstallation do not delete CSV files or user settings.

The program automatically begins searching for TERMO devices upon first launch. File logging is enabled by default, but actual recording will only begin once a valid device is detected.

3. CONNECTING TERMO TO THE COMPUTER

TERMOLOGGER CONNECTION DIAGRAM

The program only reads data - it does not control the TERMO device.



IMPORTANT

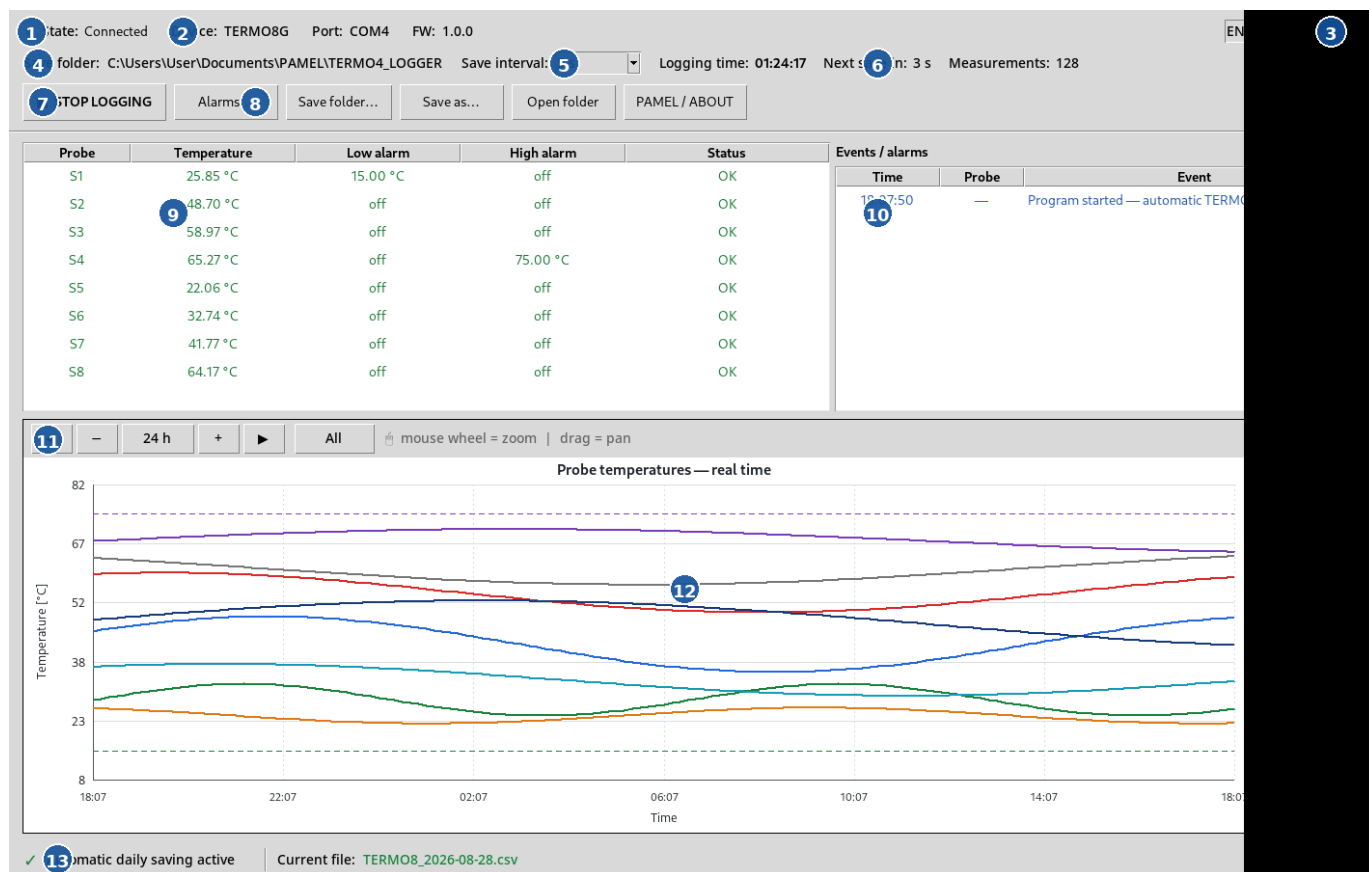
The TERMO must be a USB-equipped model. If the device was purchased without USB, the USB module can be added later, after purchase.

Connection order

1. Connect the temperature probes to the TERMO as normal and start the controller.
2. Connect the USB port of the TERMO device to the computer using a USB cable.
3. Wait while Windows creates the COM port. You don't need to know its number.
4. Launch TERMOLOGGER. The program will automatically find the correct TERMO and switch from DEMO to normal operation.
5. Check the top bar: a green dot, "Connected", TERMO model, COM number and FW version indicate a successful connection.

AUTOMATIC RECONNECTION After disconnecting the cable or restarting the TERMO, the program switches to DEMO and automatically re-searches. When the device returns, it resumes normal reading.

4. MAIN SCREEN - ELEMENT MAP

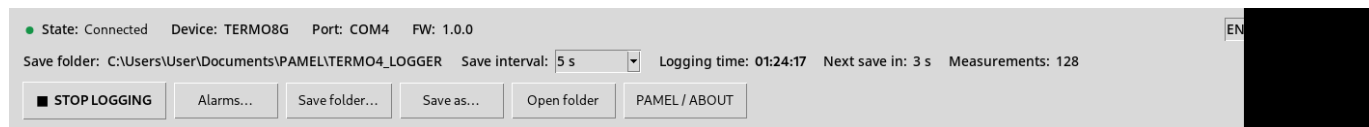


The numbering in the image corresponds to the description below.

No.	Element	No.	Element
1	Connection status	8	Function buttons
2	Model / COM / FW	9	Probe table S1...S8
3	Language selection	10	Events / alarms
4	Save folder	11	Chart control
5	Save interval	12	Temperature chart
6	Time / Next Record / Counter	13	Footer and current file
7	START / STOP logging in		

NOTE: Appearance may vary slightly between Windows versions. Functions and item names remain the same.

5. TOP BAR AND OPERATING PARAMETERS



Field	Meaning
State	Connected = green dot and operation with a real TERMO. DEMO MODE = no compatible device found.
Device	Model read automatically from TERMO.
Port	COM number assigned by Windows; selection is automatic.
FW	Software version of the TERMO device.
Language	PL, CZ, SK, EN, DE, UA, LT, LV, ET, HU.
Save folder	Where daily CSV files are stored.
Save interval	5 s, 10 s, 15 s, 60 s, 600 s or 900 s. The value is remembered.
Logging time	The time of the current recording session on the computer.
Next save in	Countdown to the next CSV entry.
Measurements	Number of measurements loaded/saved for the current day.

6. START / STOP AND FUNCTION BUTTONS

START / STOP affects file logging only



logging off - temperature view remains active

logging active - click to stop

IMPORTANT: START and STOP affect computer logging only. Temperature reading and the USB connection remain active. The button does not control TERMO.

Button	Action
START LOGGING	Enables logging to the daily CSV, starts a new session counter and counts down to the next logging.
STOP LOGGING	Closes the current file and stops recording. Temperatures are still visible.
Alarms...	Opens local alarm thresholds for S1...S8.
Save folder...	Selects a permanent data directory and checks for write access.
Save as...	Creates a copy of the current actual CSV file; does not change the autosave directory.
Open folder	Opens the data directory in Windows Explorer.
PAMEL / ABOUT	Shows version, build date, license/DEMO status and contact.

7. PROBE TABLE AND EVENTS/ALARMS

Probe	Temperature	Low alarm	High alarm	Status	Events / alarms		
S1	25.85 °C	15.00 °C	off	OK	Time	Probe	Event
S2	48.70 °C	off	off	OK	18:07:50	—	Program started — automatic TERMO
S3	58.97 °C	off	off	OK			
S4	65.27 °C	off	75.00 °C	OK			
S5	22.06 °C	off	off	OK			
S6	32.74 °C	off	off	OK			
S7	41.77 °C	off	off	OK			
S8	64.17 °C	off	off	OK			

Probe table

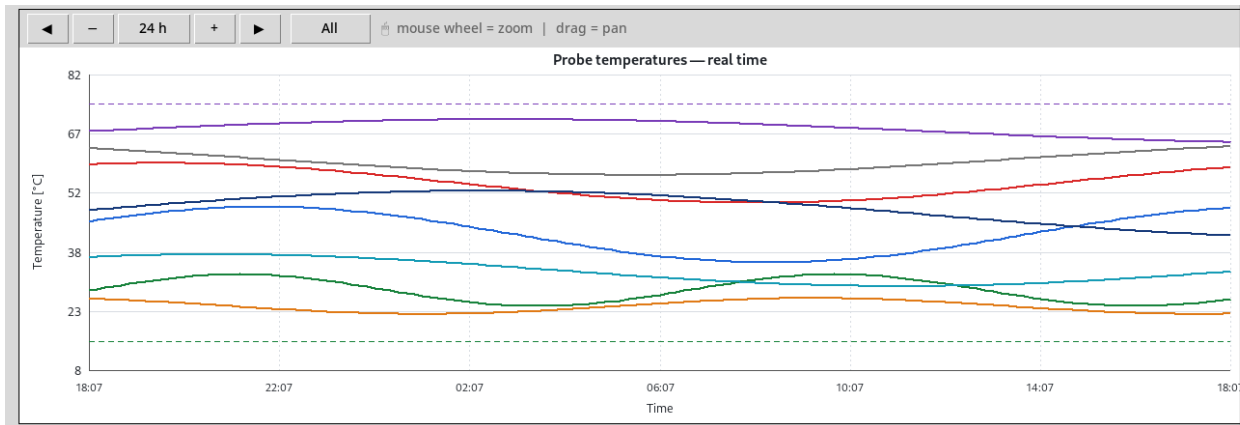
- Probe - number S1...S8. TERMO4G can provide fewer channels; unused positions remain without correct reading.
- Temperature - current value in °C when the probe is present and the reading is valid.
- Lower/upper alarm - locally set thresholds or "off".
- Status - OK, LOW ALARM, HIGH ALARM, NO PROBE or READING ERROR.

The meaning of colors

Color / Status	Meaning
Green - OK	Correct reading, temperature within allowable range.
Red - ALARM	Active lower or upper threshold exceeded.
Gray - NO PROBE	The controller reports that the probe is not present.
Orange - READ ERROR	The probe is detected, but the current reading is invalid.

The "Events/Alarms" panel stores up to 100 of the most recent messages visible in the current session: connection, disconnection, start/stop recording, alarms, recovery, probe missing, and read errors.

8. TEMPERATURE GRAPH



Up to eight probes can be viewed on a single graph. Each probe has its own color, and active alarm thresholds are marked with auxiliary lines.

Control	Action
Left / right	Move the visible time range left or right.
– / +	Zoom out or zoom in on the timeline.
24 hours	A quick view of the last 24 hours.
Whole	Shows the full range of current data available.
Mouse wheel	Zoom in at the cursor location.
Dragging	Scrolling the timeline with the mouse.
Cursor	When you point to the graph, it shows the time and temperature values near the cursor.

HISTORY After connecting to a real TERMO, the program loads the existing file for the current day. When the date changes, a new daily file is created.

9. ALARM THRESHOLDS

Thresholds are stored only in the PC application. Nothing is sent to TERMO.

Probe	Low alarm	Threshold [°C]	High alarm	Threshold [°C]
S1	☒	15.00	☐	100.00
S2	☐	0.00	☐	100.00
S3	☐	0.00	☐	100.00
S4	☐	0.00	☒	75.00
S5	☐	0.00	☐	100.00
S6	☐	0.00	☐	100.00
S7	☐	0.00	☐	100.00
S8	☐	0.00	☐	100.00

Save Cancel

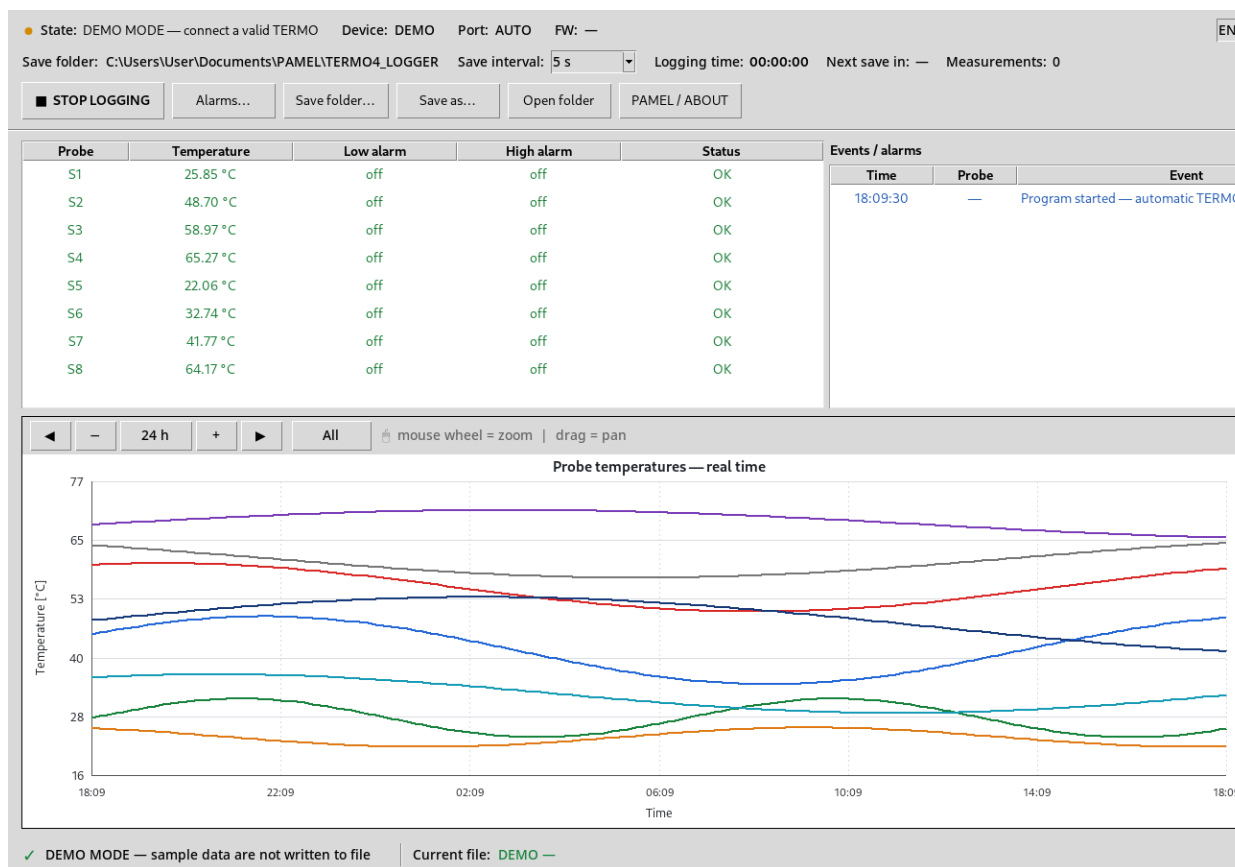
The "Alarms..." window allows you to enable lower and/or upper thresholds for each probe individually. Settings are stored locally on your computer.

ARE NOT SENT TO TERMO. Thresholds in the TERMOLOGGER do not change alarms or settings in the controller. They are used solely for data analysis on a PC.

- range of permissible threshold value: from -100 °C to 300 °C;
- if both thresholds are enabled, the lower threshold must be lower than the upper threshold;
- a high alarm occurs when the temperature is equal to or greater than the threshold;
- the low alarm occurs when the temperature is equal to or lower than the threshold;
- when the alarm returns to the correct range, an "alarm cleared" event is recorded;
- During active logging, alarm events are additionally saved to a separate CSV file.

The "Save" button confirms all thresholds. "Cancel" closes the window without changing the settings.

10. DEMO MODE AND AUTOMATIC ACTIVATION



DEMO MODE starts automatically if the program cannot find a compatible TERMO via USB/COM. An orange dot and a demo-mode message appear in the top bar.

- the program generates sample values for 8 probes and a history of approximately 24 hours;
- you can check the appearance of the table, chart, zoom and alarm settings;
- DEMO data is not added to the correct CSV;
- the "Save as..." function is disabled for demo data;
- after detecting the correct TERMO, the program automatically switches to normal operation;
- compatible TERMO acts as a hardware key - there is no manual activation code.

IF THE PROGRAM IS STILL IN DEMO First, make sure you have the USB version of TERMO. For the non-USB version, you'll need to add a USB interface.

11. MEASUREMENT RECORDING AND CSV FILES

Default data directory:

DIRECTORY Documents\PAMEL\TERMO4_LOGGER

The program does not create daily or monthly subdirectories. All files are located directly in the selected directory.

Type	File example
Measurements	TERMO8_2026-08-28.csv
Alarm events	TERMO8_ALARMY_2026-08-28.csv

Measurement file format

- field separator: semicolon ";"
- encoding: UTF-8 with BOM;
- temperatures recorded to two decimal places;
- beginning of line: Date, Time, Model, Port;
- for each probe S1...S8: temperature, presence, reading validity and status;
- each measurement is immediately flushed from the buffer to disk; the program also attempts to synchronize with fsync.

The alarm file contains: Date, Time, Probe, Type, Temperature_C, Prog_C, and Description. When the date changes, the program automatically starts a new set of files.

12. CATALOG, "SAVE AS" AND DATA SECURITY

Save folder...

The user selects a single permanent directory. The program attempts to create a test file to verify write access. Only after a successful test is the directory saved.

Save as...

Creates a copy of the current actual daily file. It does not move the automatic recording to a new location and does not stop the logger. In DEMO mode, the function does not export sample data.

Open folder

Opens the current data directory in Windows Explorer, making it easy to copy files to Excel, an archive, or an external medium.

What is remembered

Data	Place
CSV of measurements and alarms	Selected data directory, default Documents\PAMEL\TERMO4_LOGGER
Settings: language, interval, folder, alarm thresholds	Windows User Profile - LocalAppData

UPDATING / UNINSTALLING Standard program updates and uninstallations should not delete measurement files or user settings. However, it's a good idea to periodically back up important data to a separate storage device.

13. PAMEL / ABOUT THE PROGRAM



PAMEL TERMO8 PC Logger

Version: 1.0.0-rc3

Build date: 2026-08-22

**License: DEMO — no compatible
TERMO device**

**Full program operation is enabled
after connecting a compatible
TERMO device. In DEMO mode
sample data are not written to the
normal CSV files.**

Contact:

www.pamel.pl

pamel@pamel.pl

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application interface are protected
by copyright. All rights reserved.
Rights to third-party components
belong to their respective owners.**

OK

program name: PAMEL TERMO8 PC
Logger;

- version and build date;
- license status: ACTIVE when a compatible TERMO or DEMO without a device is detected;
- information that full service requires a compatible TERMO;
- PAMEL contact and copyright information.

In the version described in this manual, the "About" screen provides the company website and email address. Current manuals, user materials, and product center information are primarily available at the PAMEL Center:



serwer.pamel.pl

pamel@pamel.pl

tel. 453-343-360

14. LANGUAGE, SETTINGS AND PROGRAM UPDATES

Interface languages

PL • CZ • SK • EN • DE • UA • LT • LV • ET • HU

The EE code is supported as a compatibility alias for ET. When you change the language, the program immediately rebuilds the interface, preserving the chart data and the current view.

Settings remembered automatically

- selected language;
- recording interval;
- data directory;
- lower and upper alarm thresholds for each of the 8 probes.

Program update

- the installer terminates the running application before updating;
- detects previous version and preserves existing installation location;
- blocks the installation of an older version over a newer one;
- saves CSV files and user settings;
- The entry "Installed applications" contains the publisher PAMEL PIOTR MUSIAŁ and company links.

RULE OF THE ART: There's no need to disconnect your TERMO before updating. Once the installation is complete, run the program and check if the green "Connected" status reappears.

15. COMMON ERRORS AND DIAGNOSTICS

Symptom	Possible cause	What to do
The program remains in DEMO	TERMO without USB, cable/port problem or device incompatible.	Check if your TERMO has USB; move the cable to a different port. For versions without USB, add a USB module.
No COM port	Windows did not detect the USB interface.	Check the cable, TERMO power supply and Windows Device Manager.
Connected, then DEMO	USB interrupted or TERMO restart.	Restore the connection. The program will automatically retry the search.
NO PROBE	TERMO does not report the probe.	Check the probe connection to the controller.
READ ERROR	Probe present, but the reading is invalid.	Check the probe, cable and stability of the connection to the controller.
No CSV is created	DEMO, logging stopped, or no write permission.	Connect TERMO, start logging and select a writable folder.
Write error	Directory unavailable or permission denied.	Select a local directory that the user has full write access to.
LOWER/UPPER ALARM	The temperature has exceeded the local threshold.	Check the actual temperature and the correctness of the threshold.
Empty chart	New file / no measurements saved yet.	Wait for the first measurements; use 24 h or All.

NO MANUAL COM SELECTION: If Windows detects TERMO correctly, TERMOLOGGER finds the port automatically.

16. PROGRAM TECHNICAL DATA AND CONNECTIONS

Parameter	Value
Program	PAMEL TERMO8 PC Logger / TERMOLOGGER
Described version	1.0.0-rc3, build 2026-08-22
System	Windows
Supported devices	TERMO4G / TERMO8G compliant with PAMEL_BUS_AT 1.0 and equipped with USB
Number of channels	maximum 8 probes S1...S8
Transport	USB-COM / USART1
Port parameters	9600 bps, 8N1
Protocol	PAMEL_BUS_AT 1.0
Frame encoding	COBS, separator 0x00, CRC16-CCITT-FALSE
PC / TERMO address	0xFE / 0x01
Program commands	HELLO and GET_ALL – read only
Recording intervals	5, 10, 15, 60, 600, 900 sec
Data format	CSV, delimiter ;, UTF-8 BOM
Activation	compatible TERMO = normal mode; no TERMO = DEMO

Limitations

- TERMOLOGGER does not replace controller security or user supervision;
- the program does not send SET/COMMAND and does not control the process;
- disconnecting the computer does not change the operation of TERMO - only the preview and saving on the PC disappear;
- alarms set in TERMOLOGGER are local to the computer.

17. QUICK START, SERVICE AND MANUAL VERSION

Quick start in 8 steps

1. Install TERMOLOGGER in Windows.
2. Make sure your TERMO4G/TERMO8G has a USB interface; add a USB module if necessary.
3. Connect the probes to TERMO and turn on the device.
4. Connect TERMO to your computer using a USB cable.
5. Start TERMOLOGGER and wait for the green "Connected" status.
6. Select the save interval and check the data directory.
7. Set local alarms if needed.
8. Leave "STOP LOGGING" on the button - this means that recording is currently active.

REMEMBER: The text on the button indicates the action you will perform when you click it. When you see "STOP LOGGING," the logger is currently recording data.



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Manual version: 1.0 • date: 2026-08-28 • language: EN • describes PAMEL
TERMO8 PC Logger 1.0.0-rc3.

WARRANTY TERMS - PART 1

SCOPE These pages cover PAMEL hardware compatible with TERMOLOGGER (TERMO controller and optional USB module). TERMOLOGGER software is an auxiliary tool and does not extend the hardware warranty period.

- 1. PAMEL provides a warranty for the controller (without additional equipment) in the Republic of Poland for a maximum period of 60 months:** 24 months basic warranty, 6 months extended manufacturer's warranty; additionally, it is possible to purchase a warranty extension to 40 or 50 months.
- 2. The total warranty period cannot exceed 80 months from the device's production date.** Additional equipment, such as probes and heaters, is subject to the terms and conditions specific to the specific component. The purchased warranty extension is confirmed by a hologram sticker on the warranty card.
- 3. The warranty does not cover consumables and accessories intended for self-assembly, e.g. antennas, sensors, holders, heaters, cables and batteries.**
- 4. During the warranty period, the manufacturer will repair any recognized physical defects free of charge.** If at least four repairs have been performed under the basic warranty and the device remains defective, the Buyer is entitled to a replacement with a new unit of equivalent specifications or a refund.
- 5. The warranty period is extended by the duration of the repair.**
- 6. Complaints should be submitted via email to pamel@pamel.pl or by phone.** The manufacturer may first attempt to resolve the issue remotely and indicate further steps for the complaint. At the manufacturer's request, the Buyer will complete a complaint report.
- 7. The warranty covers only defects resulting from causes inherent in the device.**
- 8. The warranty does not cover damage resulting from improper installation, operation or maintenance, poor storage conditions, inappropriate consumables, independent repairs or modifications, mechanical damage, flooding, condensation, contamination, atmospheric phenomena, random events or exceeding the rated parameters.**
- 9. The warranty does not cover claims regarding the technical parameters of the device if they are consistent with the manufacturer's data.**

Service contact: pamel@pamel.pl • tel. 453-343-360

WARRANTY TERMS - PART 2

10. The condition for maintaining warranty rights is to deliver the device in a complete condition, in packaging protecting it against damage, together with documentation, cables and additional elements, without broken seals and stickers, and with the required warranty card and production date.
11. The warranty does not cover services and materials related to normal operating procedures, such as installation, programming, cleaning, maintenance, and replacement of consumables. Such services are subject to a fee.
12. The service center may refuse warranty repair if the data in the documentation is inconsistent with the condition of the device, unauthorized changes to the documents or removal of the device identification marks.
13. Warranty repairs are completed within 21 days of the date the device is delivered to the service center. If parts need to be imported from abroad, this deadline may be extended; the Buyer will be notified by email.
14. The device must be installed in accordance with standards and the operating instructions. If required by regulations, the installation must be performed by a qualified person.
15. Parts replaced during repair remain the property of the manufacturer.
16. The manufacturer is not responsible for the loss of user data stored on the computer or device. Before returning the computer or media for service, please back up your data.
17. The Buyer's rights arising from mandatory provisions remain independent of these warranty conditions.
18. By signing the warranty card, the Buyer confirms that they have read and accepted the warranty terms. If a warranty card is required for a given product, it must include the required signatures and the original production date.

Place for sales/warranty confirmation

WARRANTY PERIOD START DATE	SELLER'S STAMP	CUSTOMER SIGNATURE

Release of conditions in the manual: 2026-08-28